MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

MVR1023 – SIMULATION MODELLING

(All sections / Groups)

12 MARCH 2016
2.30 p.m - 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 7 pages including cover page with 20 questions in Section A and 4 questions in Section B. Total marks is 40.

2. Answer **ALL** questions in Section A and **TWO** out of **THREE** questions in Section 2. All objective questions carry equal marks and the distribution of the marks for each question is given.

3. Please print all your answers in the answer Booklet provided

SECTION A | Answer ALL
Total marks is 20

1. Objects in the real world have a visual character which result from a few references that effected them. Which one of these are **NOT** the references of the result.
   A. Where was it made
   B. When it was made
   C. How much it cost
   D. How has the environment affected it?

2. When you model a 3D asset, what are the most thing to consider first?
   A. Things in order of size
   B. Things in order of arrangement
   C. Things in order of texture
   D. Things in order of colour

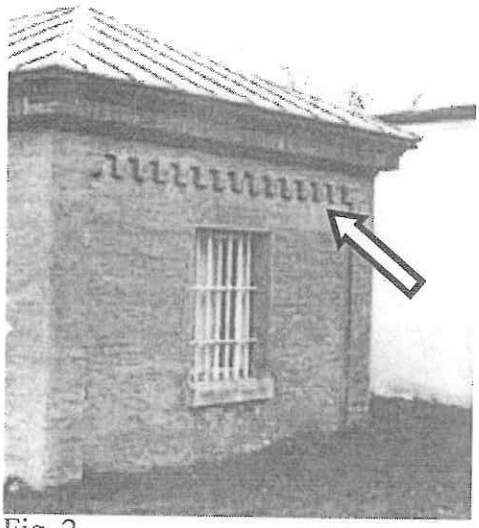
3. 'Complex shapes, combination of linked polygons' – this statement refers to?
   A. Shaders
   B. Texture
   C. Meshes
   D. Console

4. Which one of these is one of the important factor to decide where to spend polygons in asset modelling?
   A. Corners
   B. Profile
   C. Silhouette
   D. None of the above

5. Strict polygon budgets are established at the beginning of a 3D Game project. Why is that?
   A. To establish a standardize style
   B. For easier management
   C. To avoid memory-allocation problems
   D. To have easier rigging and animation

Continued...

6. Which of this statement describe POLYGONS?
   A. Combination of linked Objects
   B. Objects made up of interconnected 2D Shapes
   C. Points or locations where edges meet
   D. Organic 3D Objects

7. 
Fig. 2

In Fig.2, there is some decorative stone work. How do you create this detail in 3D model as in 'good' artistic consideration?
   A. Adding polys
   B. Adding in diffuse and normal map in texture
   C. Extrude faces
   D. Boolean to details

8. "Curvature" is one of the element to consider the level of detail in modelling assets. 2 elements need to consider in modelling curve object are?
   A. Segment in detail and division of faces
   B. Radius of curve and viewing distance
   C. Curves view and distance of segment
   D. Angle of curve and curve segment

Continued...

9. There is general pipeline structure for a 3D modelling project. Choose the right order.

I. Make a rough, low polygon "proxy mesh"
II. Apply UV coordinates
III. Create realistic surface textures
IV. Add in details
V. Bake the details from high poly mesh into the low poly mesh
VI. Optimize low poly proxy mesh

A. I, IV, II, III, VI, V
B. I, III, II, IV, VI, V
C. I, IV, III, II, VI, V
D. I, IV, II, III, V, VI

10. These are texturing elements that need to take consideration when creating texture maps **EXCEPT**.
A. Edge detailing
B. Top and bottom
C. Stitching maps
D. Joining elements

11. Which one of these mapping techniques eliminates texture distortion in 3Ds Max's Edit UVW.
A. Box Mapping
B. Unfold Mapping
C. Flatten Mapping
D. Normal Mapping

12. In the texture elements of the wall…
A. The texture at top and bottom are always the same.
B. The texture at the top and bottom often has different characteristics to the middle.
C. The texture at the bottom often clean as new.
D. The texture is similar to the roof.

13. What is the command in 3Ds Max to export UVW map template to Photoshop?
A. Edit > Free Gizmo
B. Tools > Stitch Selected
C. Mapping > Flatten Mapping
D. Tools > Render UVW Template

Continued…

14. 'Box Modelling' technique refers to?
    A. Constructing your model from a simple polygon box
    B. Constructing your model by combining meshes of boxes
    C. Constructing your model in segments of boxes
    D. Modelling a Box

15. What are normal maps?
    A. A normal map is used to create reflection effect on the surface.
    B. A normal map is used to create shinning effect when react to lighting.
    C. A normal map is used to create relief on the object which react to lighting.
    D. A normal map is used to create coloured texture on surface.

16. Which one of these are types of normal map?
    I. Vertex space
    II. World space
    III. Object space
    IV. Tangent

    A. II, III & IV
    B. I & IV
    C. I & II
    D. I, II & III

17. In the Principle of Animation by Disney Animators Ollie Johnston and Frank Thomas (1981), 'Anticipation' is referred to…
    A. The deformation of organic bodies
    B. Actions that is presented one item at a time
    C. Defining a set of 'key' poses which represents the extremes of a particular action
    D. The preparation for the action

18. Which of these are the **BENEFIT** of having more joints for character rigging?
    A. More control over the character movement
    B. More animations can be made to the character
    C. More key frames can be added towards a character's animation
    D. More rigid form of animations can be made

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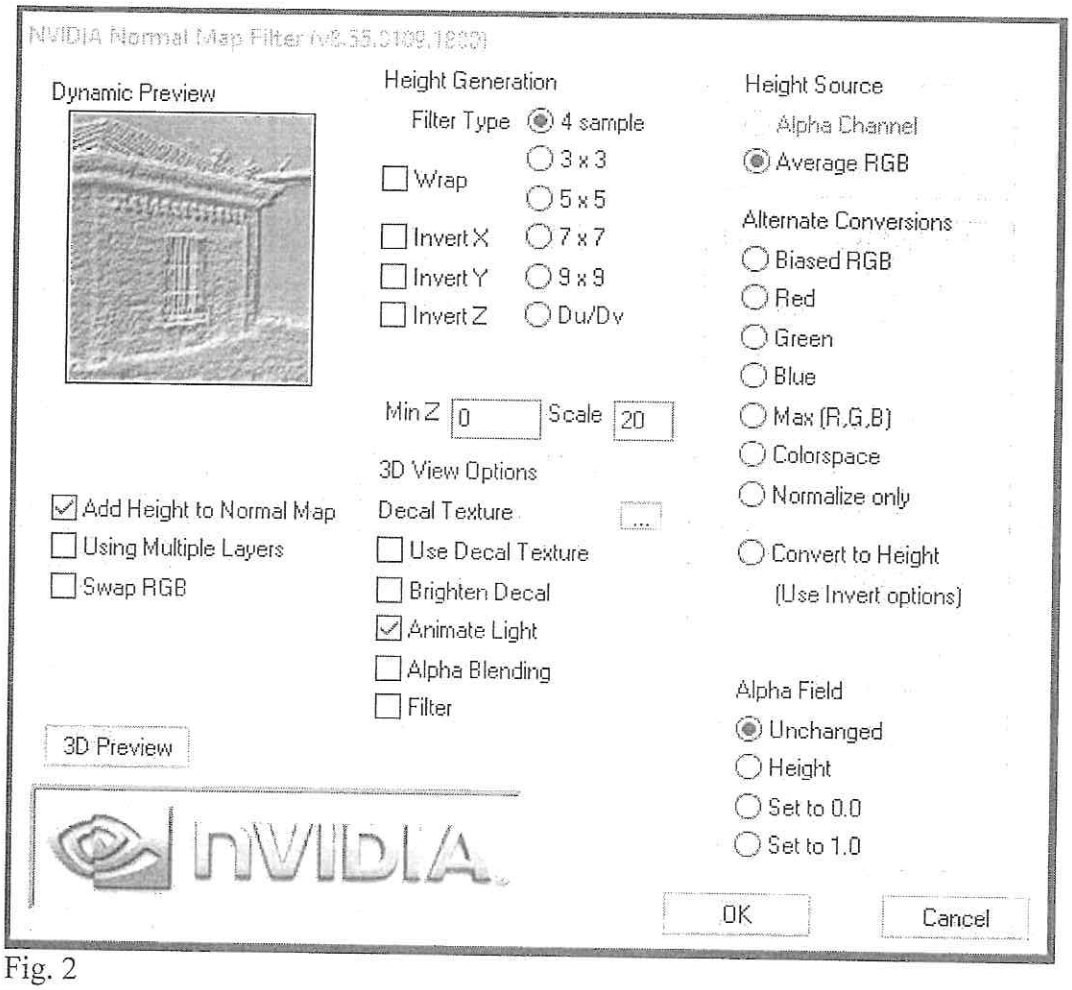

Fig. 2

19. In Fig.2 which properties will control the normal height or depth?
    A. Filter
    B. Colorspace
    C. Scale
    D. Alpha Field

20. In Fig .2, what will you see in 3D Preview?
    A. RGB level for map
    B. Bump level for map
    C. Greyscale for map
    D. Alpha level for map

Continued...

SECTION B
Answer TWO out of THREE questions.

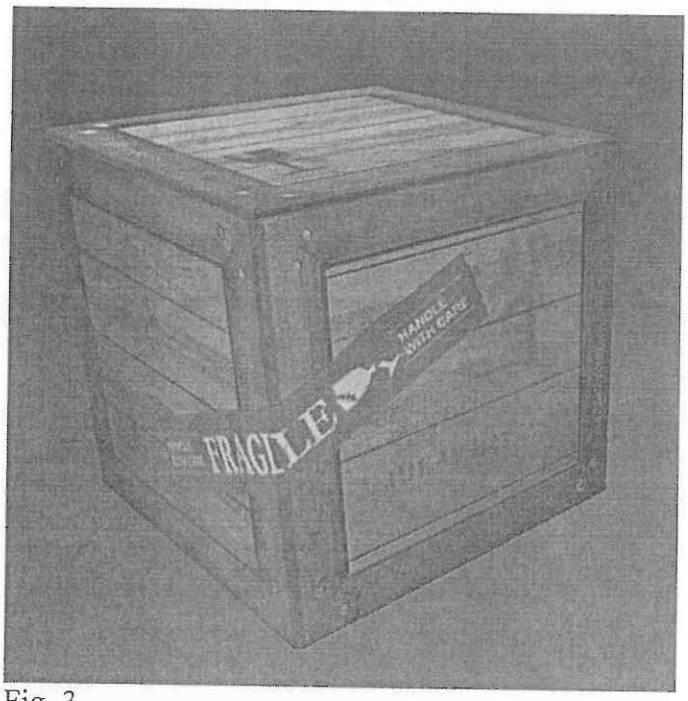

Fig. 3

1. Describe the process to create the texture for the "BOX" in Fig.3. (Steps in 3Ds Max and Photoshop.) (10 Marks)

2. Describe the meaning of SHARED TEXTURE, CONTINOUS TEXTURE and UNIQUE TEXTURE and sketch or draw the texture map of the "BOX" in Fig.3 (10 Marks)

3. In UV Editor, there are 3 types of tools you can use to unwrapped the object mapping. Names all of those tools. (6 Marks). Select ONE and describe how it works.(4 Marks)

End of Paper